



[6450-01-P]

**DEPARTMENT OF ENERGY**

**10 CFR Part 430**

**EERE-2017-BT-TP-0028**

**RIN 1904-AE03**

**Energy Conservation Program: Test Procedures for Water Closets and Urinals**

**AGENCY:** Office of Energy Efficiency and Renewable Energy, Department of Energy.

**ACTION:** Notice of proposed rulemaking and request for comment.

**SUMMARY:** The U.S. Department of Energy (“DOE”) proposes to amend the test procedures for water closets and urinals, to reference the most recent update to the relevant industry standard, American Society of Mechanical Engineers (“ASME”) Standard 112.19.2-2018. DOE also proposes to replace the term “blowout toilet” with “blowout bowl water closet,” and add definitions for the terms “blowout action,” “gravity flush tank water closet,” “siphonic action,” “siphonic bowl,” and “trough-type urinal,” which are currently used in the Federal test procedures but not defined. DOE is seeking comment from interested parties on the proposal.

**DATES:** DOE will accept comments, data, and information regarding this proposal no later than **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**. See section V, “Public Participation,” for details. DOE will hold a webinar on June 16, 2021, from 10:00 a.m. to 3:00 p.m. See section V, “Public Participation,” for webinar

registration information, participant instructions, and information about the capabilities available to webinar participants. If no participants register for the webinar, it will be cancelled.

**ADDRESSES:** Interested persons are encouraged to submit comments using the Federal eRulemaking Portal at *www.regulations.gov*. Follow the instructions for submitting comments. Alternatively, interested persons may submit comments, identified by docket number EERE–2017–BT–TP–0028, by email to the following address: *PlumbingProducts2017TP0028@ee.doe.gov*. Include the docket number EERE–2017–BT–TP–0028 or regulatory information number (RIN) 1904-AE03 in the subject line of the message. Submit electronic comments in WordPerfect, Microsoft Word, PDF, or ASCII file format, and avoid the use of special characters or any form of encryption.

Although DOE has routinely accepted public comment submissions through a variety of mechanisms, including postal mail and hand delivery/courier, the Department has found it necessary to make temporary modifications to the comment submission process in light of the ongoing Covid-19 pandemic. DOE is currently accepting only electronic submissions at this time. If a commenter finds that this change poses an undue hardship, please contact Appliance Standards Program staff at (202) 586-1445 to discuss the need for alternative arrangements. Once the Covid-19 pandemic health emergency is resolved, DOE anticipates resuming all of its regular options for public comment submission, including postal mail and hand delivery/courier.

*Docket:* The docket, which includes *Federal Register* notices, public meeting attendee lists and transcripts (if a public meeting is held), comments, and other supporting

documents/materials, is available for review at [www.regulations.gov](http://www.regulations.gov). All documents in the docket are listed in the [www.regulations.gov](http://www.regulations.gov) index. However, some documents listed in the index, such as those containing information that is exempt from public disclosure, may not be publicly available.

The docket web page can be found at <https://www.regulations.gov/docket?D=EERE-2017-BT-TP-0028>. The docket web page contains instructions on how to access all documents, including public comments, in the docket. See section V for information on how to submit comments through [www.regulations.gov](http://www.regulations.gov).

#### **FOR FURTHER INFORMATION CONTACT:**

Mr. Bryan Berringer, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Office, EE-5B, 1000 Independence Avenue, SW., Washington, DC, 20585-0121. Telephone: (202) 586-0371. E-mail [ApplianceStandardsQuestions@ee.doe.gov](mailto:ApplianceStandardsQuestions@ee.doe.gov).

Mr. Matthew Ring, U.S. Department of Energy, Office of the General Counsel, 1000 Independence Avenue SW., GC-33, Washington, DC 20585; (202) 586-2555; [Matthew.Ring@hq.doe.gov](mailto:Matthew.Ring@hq.doe.gov).

For further information on how to submit a comment, review other public comments and the docket, or participate in a public meeting (if one is held), contact the Appliance and Equipment Standards Program staff at (202) 287-1445 or by e-mail: [ApplianceStandardsQuestions@ee.doe.gov](mailto:ApplianceStandardsQuestions@ee.doe.gov).

## **SUPPLEMENTARY INFORMATION:**

DOE proposes to incorporate by reference the following industry standard into part 430:

ASME A112.19.2-2018/CSA B45.1-18, “Ceramic plumbing fixtures,” approved 2018  
 (“ASME A112.19.2-2018”).

Copies of ASME A112.19.2-2018 can be obtained from American Society of Mechanical Engineers at Two Park Avenue, New York, NY 10016-5990, or by going to [www.asme.org](http://www.asme.org).

For a further discussion of this standard, see section IV.M.

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## **I. Authority and Background**

Water closets and urinals are included in the list of “covered products” for which DOE is authorized to establish and amend water use standards and test procedures. (42 U.S.C. 6292(a)(17) and (18)) DOE’s test procedures for water closets and urinals are prescribed in the CFR at 10 CFR 430.23(u) and (v), respectively, and 10 CFR part 430 subpart B appendix T (“Appendix T”). The following sections discuss DOE’s authority to establish test procedures for water closets and urinals, as well as relevant background information regarding DOE’s consideration of test procedures for this product.

### *A. Authority*

The Energy Policy and Conservation Act, as amended (“EPCA”),<sup>1</sup> authorizes DOE to regulate the energy efficiency or water use of a number of consumer products and certain industrial equipment. (42 U.S.C. 6291–6317) Title III, Part B<sup>2</sup> of EPCA established the Energy Conservation Program for Consumer Products Other Than Automobiles, which sets forth a variety of provisions designed to improve energy efficiency and water use. These products include water closets and urinals, the subject of this document. (42 U.S.C. 6292(a)(17) and (18))

The energy conservation program under EPCA, which includes water use requirements, consists essentially of four parts: (1) testing, (2) labeling, (3) Federal energy conservation standards, and (4) certification and enforcement procedures. Relevant provisions of EPCA specifically include definitions (42 U.S.C. 6291), test procedures (42 U.S.C. 6293), labeling provisions (42 U.S.C. 6294), energy conservation standards<sup>3</sup> (42 U.S.C. 6295), and the authority to require information and reports from manufacturers. (42 U.S.C. 6296)

The Federal testing requirements consist of test procedures that manufacturers of covered products must use as the basis for: (1) certifying to DOE that their products comply with the applicable energy conservation standards adopted pursuant to EPCA (42 U.S.C. 6295(s)), and (2) making representations about the energy and water use, as applicable, of those consumer products. (42 U.S.C. 6293(c)) Similarly, DOE must use these test procedures to determine

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<sup>1</sup> All references to EPCA in this document refer to the statute as amended through America’s Water Infrastructure Act of 2018, Public Law 115–270 (Oct. 23, 2018).

<sup>2</sup> For editorial reasons, upon codification in the U.S. Code, Part B was re-designated Part A.

<sup>3</sup> The term “energy conservation standard” includes water use standards for showerheads, faucets, water closets and urinals. (42 U.S.C. 6291(6)(A))

whether the products comply with relevant standards promulgated under EPCA. (42 U.S.C. 6295(s))

Federal energy efficiency and water use requirements for covered products established under EPCA generally supersede State laws and regulations concerning energy and water conservation testing, labeling, and standards. (42 U.S.C. 6297) DOE may, however, grant waivers of Federal preemption for particular State laws or regulations, in accordance with the procedures and other provisions of EPCA. (42 U.S.C. 6297(d))

Under 42 U.S.C. 6293, EPCA sets forth the criteria and procedures DOE must follow when prescribing or amending test procedures for covered products. EPCA requires that any test procedures prescribed or amended under this section be (1) reasonably designed to produce test results which measure energy efficiency, energy use, water use (for plumbing products such as water closets and urinals), or estimated annual operating cost of a covered product during a representative average use cycle or period of use and (2) not be unduly burdensome to conduct. (42 U.S.C. 6293(b)(3))

EPCA directs that the test procedures for water closets and urinals are to be the test procedures specified in American Society of Mechanical Engineers A112.19.6–1990, “Hydraulic Requirements for Water Closets and Urinals” (“ASME A112.19.6–1990”). (42 U.S.C. 6293(b)(8)(A)) EPCA further directs that, if the requirements of ASME A112.19.6–1990 are revised at any time and approved by the American National Standards Institute (“ANSI”), DOE must amend the Federal test procedures to conform to the revised ASME/ANSI standard, unless DOE determines by rule that to do so would not meet the requirements of EPCA that the test

procedures be reasonably designed to produce test results which measure water use during a representative average use cycle as determined by DOE, and not be unduly burdensome to conduct. (42 U.S.C. 6293(b)(8)(B)) If DOE determines that a test procedure amendment is warranted, it must publish proposed test procedures and offer the public an opportunity to present oral and written comments on them. (42 U.S.C. 6293(b)(2))

EPCA also requires that, at least once every 7 years, DOE evaluate test procedures for each type of covered product, including water closets and urinals, to determine whether amended test procedures would more accurately or fully comply with the requirements for the test procedures to be reasonably designed to produce test results that reflect water use and estimated operating costs during a representative average use cycle or period of use, and not be unduly burdensome to conduct. (42 U.S.C. 6293(b)(1)(A)). If the Secretary determines, on his own behalf or in response to a petition by any interested person, that a test procedure should be prescribed or amended, the Secretary shall promptly publish in the *Federal Register* proposed test procedures and afford interested persons an opportunity to present oral and written data, views, and arguments with respect to such procedures. (42 U.S.C. 6293(b)(2)) The comment period on a proposed rule to amend a test procedure shall be at least 60 days and may not exceed 270 days.<sup>4</sup> *Id.* In prescribing or amending a test procedure, the Secretary shall take into account

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<sup>4</sup> DOE has historically provided a 75-day comment period for test procedure NOPRs, consistent with the comment period requirement for technical regulations in the North American Free Trade Agreement, U.S.-Canada-Mexico (“NAFTA”), Dec. 17, 1992, 32 I.L.M. 289 (1993); the North American Free Trade Agreement Implementation Act, Pub. L. 103-182, 107 Stat. 2057 (1993) (codified as amended at 10 U.S.C.A. 2576) (1993) (“NAFTA Implementation Act”); and Executive Order 12889, “Implementation of the North American Free Trade Agreement,” 58 FR 69681 (Dec. 30, 1993). However, Congress repealed the NAFTA Implementation Act and has replaced NAFTA with the Agreement between the United States of America, the United Mexican States, and the United Canadian States (“USMCA”), Nov. 30, 2018, 134 Stat. 11, thereby rendering E.O. 12889 inoperable. Consequently, since the USMCA is consistent with EPCA’s public comment period requirements and normally requires only a minimum comment period of 60 days for technical regulations, DOE now provides a 60-day public comment period for test procedure NOPRs.



such information as the Secretary determines relevant to such procedure, including technological developments relating to energy or water use or energy efficiency of the type (or class) of covered products involved. *Id.* If DOE determines that test procedure revisions are not appropriate, DOE must publish its determination not to amend the test procedures.

DOE is publishing this notice of proposed rulemaking (“NOPR”) in satisfaction of these requirements under EPCA. (42 U.S.C. 6293(b)(1)(A) and (b)(8)(B))

### *B. Background*

DOE’s current test procedures for water closets and urinals are found in 10 CFR 430.23(u) and (v), respectively, and Appendix T.

DOE last amended the test procedures for water closets and urinals on October 23, 2013, (“October 2013 final rule”). 78 FR 62970. In the October 2013 final rule, DOE incorporated by reference ASME A112.19.2–2008, “Ceramic Plumbing Fixtures,” including Update No. 1, dated August 2009, and Update No. 2, dated March 2011 (“ASME A112.19.2– 2008”). ASME A112.19.2–2008 is a consolidation and revision of several ASME test methods, including a revised version of the test method previously incorporated by reference, ASME A112.19.6–1995, and, for purposes of testing water closets and urinals, is the successor standard to the ASME A112.19.6-1990 standard required by EPCA. (42 U.S.C. 6293(b)(8)(A))

In July 2013, ASME revised ASME A112.19.2–2008 by issuing ASME A112.19.2–2013, “Ceramic Plumbing Fixtures” (“ASME A112.19.2– 2013”). In October 2013, ASME published Update 1 for ASME A112.19.2–2013 (“ASME A112.19.2–2013 Update 1”). Because

of the timing of the issuance of ASME A112.19.2–2013 in July 2013, and ASME A112.19.2–2013 Update 1 in October 2013, DOE did not incorporate either 2013 version of the industry standard in the October 2013 final rule. 78 FR 62970, 62977.

In July 2018, ASME revised ASME A112.19.2–2013 by publishing ASME A112.19.2–2018, followed by the addition of an errata sheet in October 2018 (“ASME A112.19.2–2018” refers to both the original document and the October 2018 errata sheet). ASME A112.19.2–2018 does not contain any substantive differences compared to ASME A112.19.2–2013 regarding the test apparatus and instructions for testing water closets and urinals, and the test method for water consumption (see section III.B for further discussion).

On August 5, 2019, DOE published a request for information (“August 2019 RFI”) pertaining to the test procedures for water closets and urinals. 84 FR 37970. In the August 2019 RFI, DOE solicited public comments, data, and information on all aspects of, and any issues or problems with, the existing DOE test procedures for water closets and urinals, including on any needed updates or revisions. Specifically, DOE requested comment on whether to conform the test procedures to ASME A112.19.2-2018, including updates to terms and definitions, figures, and tables. *Id.* DOE received four comments in response to the August 2019 RFI from the interested parties listed in Table I.1.<sup>5</sup>

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<sup>5</sup> Comments provided in the docket are available at <https://www.regulations.gov/docket?D=EERE-2017-BT-TP-0028>.

**Table I.1 Written Comments Received in Response to August 2019 RFI**

<b>Commenter</b>	<b>Reference in this NOPR</b>	<b>Categorization</b>
California Investor Owned Utilities	CA IOUs	Utility Companies
Cooper Reaves	Reaves	Member of the Public
Natural Resources Defense Council, Appliance Standards Awareness Project	NRDC and ASAP	Efficiency Advocacy Organizations
Plumbing Manufacturers International	PMI	Trade Association

## **II. Synopsis of the Notice of Proposed Rulemaking**

In this NOPR, DOE proposes to update 10 CFR 430.2 (Definitions), 10 CFR 430.3 (Materials Incorporated by Reference), and Appendix T as follows:

- 1) Incorporate by reference ASME A112.19.2-2018, “Ceramic plumbing fixtures;”
- 2) Replace the current term “blowout toilet” with “blowout bowl water closet;” and
- 3) Add terms and corresponding definitions for “blowout action,” “gravity flush tank water closet,” “siphonic action,” “siphonic bowl,” and “trough-type urinal.”

DOE’s proposed actions are summarized in Table II-1, which provides a comparison of each proposed change to the current test procedures, as well as the rationale for the proposed change.

**Table II-1 Summary of Proposed Changes to the Test Procedures Relative to the Current Test Procedures**

<b>Current DOE Test Procedures</b>	<b>Proposed Test Procedures</b>	<b>Attribution</b>
Incorporates the 2008 version of ASME A112.19.2 for measurement of water consumption.	Incorporates the 2018 version of ASME A112.19.2.	Industry TP update to ASME A112.19.2-2018.

<b>Current DOE Test Procedures</b>	<b>Proposed Test Procedures</b>	<b>Attribution</b>
References and defines the term “blowout toilet.”	Defines the term “blowout bowl,” and references the term “blowout bowl water closet” in lieu of “blowout toilet”. Defines the term “blowout action,” which is included within the proposed definition of “blowout bowl.”	Clarifies and harmonizes terms and definitions with ASME A112.19.2-2018.
References the terms “gravity flush tank water closet” and “siphonic bowl,” but does not define either term.	Defines the terms “gravity flush tank water closet” and “siphonic bowl.” Defines the term “siphonic action,” which is included within the proposed definition of “siphonic bowl.”	Clarifies and harmonizes definitions with ASME A112.19.2-2018.
References the term “trough-type urinal,” but does not define it.	Defines the term “trough-type urinal.”	Harmonizes the definition of the term with stakeholder recognized definition.

DOE has tentatively determined that the proposed amendments described in section III of this NOPR would not alter the measured water use of water closets and urinals, which is representative of average use cycles, and that the proposed test procedures would not be unduly burdensome to conduct. Discussion of DOE’s proposed actions are addressed in detail in section III of this NOPR.

### **III. Discussion**

#### *A. Scope of Applicability*

This NOPR applies to both water closets and urinals, as defined in 10 CFR 430.2. DOE defines a “water closet” as a plumbing fixture that has a water-containing receptor that receives liquid and solid body waste, and upon actuation, conveys the waste through an exposed integral trap seal into a gravity drainage system, except such term does not include fixtures designed for installation in prisons. 10 CFR 430.2. DOE defines a “urinal” as a plumbing fixture that receives only liquid body waste and, on demand, conveys the waste through a trap seal into a gravity

drainage system, except such term does not include fixtures designed for installations in prisons.  
*Id.*

The proposed updates in this NOPR would not change the scope of the test procedures for water closets or urinals.

### *B. Updates to Industry Standards*

Currently, DOE's test procedures for water closets and urinals in Appendix T incorporate by reference ASME A112.19.2-2008,<sup>6</sup> sections 7.1, 7.1.1, 7.1.2, 7.1.3, 7.1.4, 7.1.5, 7.4, 8.2, 8.2.1, 8.2.2, 8.2.3, 8.6, Table 5, and Table 6. These sections and tables provide procedures for testing and measuring water consumption, specifications for test apparatus, and other general requirements for the testing of water closets and urinals.

ASME A112.19.2-2018, the current version of the standard, amends pertinent sections of the 2008 version currently incorporated into 10 CFR part 430. These amendments include (1) editorial changes and clarification in sections 7.1.2, 7.3.2,<sup>7</sup> 8.6.4, and Figure 12<sup>8</sup>; (2) a correction in section 8.2.1 to the water consumption static test pressure value for urinals to reflect the corresponding value in Table 6; and (3) additions to Table 5 that do not appear to be relevant to the water consumption test for water closets. In the August 2019 RFI, DOE had tentatively determined that these amendments would not impact (1) the measured values of water use for

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<sup>6</sup> This reference includes Update No. 1, dated August 2009, and Update No. 2, dated March 2011.

<sup>7</sup> The water consumption test is section 7.4 in ASME A112.19.2-2008, but section 7.3 in ASME A112.19.2-2018.

<sup>8</sup> While Figure 12 is not incorporated by reference in 10 CFR 430.3(h)(2), Figure 12 is referenced within section 7.1.1, which is currently incorporated by reference.

water closets and urinals under Appendix T, (2) the representativeness of the results, or (3) the test burden, and requested comment on this tentative determination. 84 FR 37970, 37973.

In response to the August 2019 RFI, PMI generally agreed with DOE's evaluation of ASME A112.19.2-2018, as compared to the currently referenced version. (PMI, No. 3 at p. 1)<sup>9</sup> The CA IOUs generally supported updating the referenced ASME A112.19.2 standard to the 2013 version, which they stated is the most recent version formally approved and accepted, to capture substantive updates. (CA IOUs, No. 4 at p. 2). The CA IOUs also recommended that DOE include "less substantive" updates from the 2018 edition, including definitions, editorial changes, and corrections. *Id.* Specifically, the CA IOUs suggested that DOE make the correction in section 8.2.1 of ASME A112.19.2-2018 to the water consumption static pressure value for urinals in DOE's regulations to reflect the corresponding value in Table 6. (CA IOUs, No. 4 at p. 4) Other stakeholders did not comment directly on DOE's evaluation of the 2013 and 2018 versions of ASME A112.19.2.

DOE reiterates its tentative determination from the August 2019 RFI that the amendments in ASME A112.19.2-2018 would not impact (1) the measured values of water use for water closets and urinals under Appendix T, (2) the representativeness of the results, or (3) the test burden. As stated previously, ASME A112.19.2-2018 is the most recent version of the industry standard, and DOE understands the 2018 version to have been approved by ANSI on June 15, 2018.<sup>10</sup> The CA IOUs stated that the 2013 version of ASME A112.19.2 contains

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<sup>9</sup> A notation in the form "PMI, No. 3 at p. 1" identifies a written comment: (1) made by PMI; (2) recorded in document number 3 that is filed in the docket of this test procedure rulemaking (Docket No. EERE-2017-BT-TP-0028) and available for review at [www.regulations.gov](http://www.regulations.gov); and (3) which appears on page 1 of document number 3.

<sup>10</sup> ANSI approval of A112.19.2-2018 indicated in ASME A112 Standards Status Report, available at <https://cstools.asme.org/csconnect/Filedownload.cfm?43452.5508681&dir=CommitteeFiles&thisfile=487.pdf>.

substantive updates to the 2008 version, currently referenced in DOE’s test procedures. If DOE adopts the 2018 version as proposed, DOE’s regulations would reflect the substantive updates of interest to the CA IOUs. For the reasons described in the August 2019 RFI and reiterated previously, DOE is proposing to incorporate by reference ASME A112.19.2-2018.

DOE requests comment on its proposal to incorporate by reference ASME A112.19.2-2018.

DOE also proposes to remove references in Appendix T to the industry standard that are superfluous. Specifically, Appendix T references section 7.1 in addition to subsections 7.1.1, 7.1.2, 7.1.3, 7.1.4 and 7.1.5 of ASME A112.19.2-2008.<sup>11</sup> Section 7.1 only provides the title “General,” without any other content. The referenced subsections 7.1.1, 7.1.2, 7.1.3, 7.1.4 and 7.1.5 provide the general specifications needed for performing the test procedure. Therefore, DOE proposes to exclude the reference to section 7.1 of ASME A112.19.2-2018 in Appendix T. Similarly, section 8.2 only provides the title “Test apparatus and general instructions,” whereas sections 8.2.1, 8.2.2, and 8.2.3 provide the test apparatus and instructions needed for performing the test procedure. Therefore, DOE also proposes to exclude the reference to section 8.2 of ASME A112.19.2-2018 in Appendix T.

DOE requests comment on its proposal to remove references to section 7.1 and 8.2 of ASME A112.19.2-2018 in Appendix T.

### *C. Definitions*

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<sup>11</sup> The 2018 industry standard update made no changes to these sections.

Several terms and definitions in ASME A112.19.2–2018 related to water closets and urinals vary from those in DOE regulations, including terms not defined in 10 CFR 430.2. Table III-1 provides a summary of the terms and definitions discussed in this NOPR.

**Table III-1 Water Closets and Urinals: Terms and Definitions**

<b>Term</b>	<b>Usage in Appendix T, 10 CFR 430.32(q) or 10 CFR 430.32(r)</b>	<b>DOE Definition (10 CFR 430.2)</b>	<b>ASME Definition (A112.19.2-2018)</b>	<b>DOE’s Proposal</b>
Toilet	10 CFR 430.32(q).	None.	None.	Replace term with “water closet.”
Electromechanical hydraulic toilet	10 CFR 430.32(q).	A water closet that utilizes electrically operated devices such as, but not limited to, air compressors, pumps, solenoids, motors, or macerators in place of or to aid gravity in evacuating waste from the toilet.	None.	Replace term with “electromechanical hydraulic water closet” while maintaining existing definition.
Electro-hydraulic water closet	Not used.	None.	A water closet with a nonmechanical trap seal incorporating an electric motor and controller to facilitate flushing.	No update.
Blowout toilet	10 CFR 430.32(q).	A water closet that uses a non-siphonic bowl with an integral flushing rim, a trap at the rear of the bowl, and a visible or concealed jet that operates with a blowout action.	None.	Replace term with “blowout bowl water closet.”
Blowout bowl	Appendix T.	None.	A non-siphonic water closet bowl with an integral flushing rim, a trap at the rear of the bowl, and a visible or concealed jet that operates with a blowout action.	Adopt ASME A112.19.2-2018 definition.
Blowout action	Not used.	None.	A means of flushing a water closet whereby a jet of water directed at the bowl outlet opening pushes the bowl	Adopt ASME A112.19.2-2018 definition.



			contents into the upleg, over the weir, and into the gravity drainage system.	
Blowout water closet	Appendix T.	None.	None.	Replace term with “blowout bowl water closet.”
Gravity flush tank water closet	Appendix T.	None.	A water closet designed to flush the bowl with water supplied by gravity only.	Adopt ASME A112.19.2-2018 definition.
Siphonic bowl	Appendix T.	None.	A water closet bowl that has an integral flushing rim, a trap at the front or rear, and a floor or wall outlet, and operated with a siphonic action (with or without a jet).	Adopt ASME A112.19.2-2018 definition.
Siphonic action	Not used.	None.	The movement of water through a flushing fixture by creating a siphon to remove waste material.	Adopt ASME A112.19.2-2018 definition.
Trough-type urinal	10 CFR 430.32(r).	None.	None.	Adopt California’s regulatory definition.

These terms and definitions are discussed in greater detail in the following paragraphs.

## 1. Toilet versus Water Closet

Although EPCA and DOE’s test procedure use the term “water closet,” several terms in 10 CFR 430.32(q) reference the term “toilet” instead, which is not defined. See 42 U.S.C. 6292(a)(17) DOE defines “water closet” at 10 CFR 430.2. DOE understands the terms “toilet” and “water closet” as interchangeable. As such, and consistent with the nomenclature in EPCA and DOE’s product definitions, DOE proposes in this NOPR to replace all instances of the term “toilet” in 10 CFR 430.32(q) with “water closet”. Specifically, this proposal includes replacing “toilet” with “water closet” in the following terms: gravity tank-type toilet, flushometer tank

toilet, electromechanical hydraulic toilet and blowout toilet. DOE is also proposing other updates to many of these terms, as discussed in the following sections.

DOE requests comment on the proposal to replace the term “toilet” with “water closet” in 10 CFR 430.32(q).

## 2. Electromechanical Hydraulic Toilet versus Electro-hydraulic Water Closet

DOE regulations at 10 CFR 430.32(q) use the statutory term “electromechanical hydraulic toilet” (42 U.S.C. 6295(k)(1)(A)) as the name of a product class subject to water standards. DOE defines “electromechanical hydraulic toilet” as a water closet that utilizes electrically operated devices such as, but not limited to, air compressors, pumps, solenoids, motors, or macerators in place of or to aid gravity in evacuating waste from the toilet. 10 CFR 430.2. ASME A112.19.2–2018, however, uses the term “electro-hydraulic water closet,” defined as a water closet with a non-mechanical trap seal incorporating an electric motor and controller to facilitate flushing. Both definitions include an electric motor as a mechanism to remove waste. However, in the August 2019 RFI, DOE tentatively concluded that the scope of the term “electromechanical hydraulic toilet” is broader because it also includes other electrically operated devices. 84 FR 37972.

In the August 2019 RFI, DOE requested comment on whether the terms “electromechanical hydraulic toilet” and “electro-hydraulic water closet” are understood to include the same products, and any potential impact, including to testing burden, of adopting the term “electro-hydraulic water closet” and the corresponding definition in ASME A112.19.2–2018, as compared to maintaining the current DOE term “electromechanical hydraulic toilet” and

its definition in 10 CFR 430.2. In response to the August 2019 RFI, PMI recommended that DOE adopt the term “electro-hydraulic water closet” as defined in the latest industry standard and to remove its current term “electromechanical water closet.” (PMI, No. 3 at p. 2) PMI stated that the terms “electro-hydraulic water closet” and “electromechanical hydraulic toilet” are understood throughout the industry to include the same products. *Id.* The CA IOUs recommended keeping the current term and definition and stated that the ASME definition for “electro-hydraulic water closet” is narrower in scope than the current DOE definition for “electromechanical water closet.” (CA IOUs, No. 4 at p. 3)

DOE continues to view the current regulatory term “electromechanical hydraulic toilet” as broader in scope than ASME’s “electro-hydraulic water closet” because it includes water closets that use electrically operated devices in addition to electric motors (*e.g.*, air compressors, pumps, solenoids, motors or macerators). In this NOPR, DOE is not proposing to change the scope of the water closet test procedure. As such, DOE is not proposing to amend the definition of “electromechanical hydraulic toilet” at 10 CFR 430.2 other than by replacing the term “toilet” with “water closet,” as discussed in section III.C.1 of this document.

DOE requests comment on the proposal to replace the term “electromechanical hydraulic toilet” with “electromechanical hydraulic water closet,” while retaining the existing regulatory definition of “electromechanical hydraulic toilet.”

### 3. Blowout Toilet versus Blowout Bowl

DOE regulations use the statutory term “blowout toilet” (42 U.S.C. 6295(k)(1)(A)) as the name of a product class subject to water standards at 10 CFR 430.32(q). DOE defines this term

at 10 CFR 430.2. DOE also uses the undefined terms “blowout bowl” and “blowout water closets” in section 3.a.ii of Appendix T. ASME A112.19.2–2018, on the contrary, defines the term “blowout bowl” and does not define the term “blowout toilet.” Although DOE’s definition of “blowout toilet” and ASME’s definition of “blowout bowl” are not identical, they are similar, as illustrated in Table III-1. DOE’s definition of “blowout toilet” refers to the entire product, using the phrase “water closet that uses a non-siphonic bowl,” whereas ASME’s definition of “blowout bowl” refers specifically to the bowl portion of the product, using the phrase “a non-siphonic water closet bowl.” Within ASME A112.19.2–2018, the term “blowout bowl” is used in some instances to refer specifically to the type of bowl (*e.g.*, in contrast to a “siphonic bowl” or “washdown bowl”), and in other instances to refer to the entire water closet (*e.g.* in contrast to a “flushometer valve water closet”).

In the August 2019 RFI, DOE tentatively concluded that the terms “blowout toilet” and “blowout bowl” are synonymous and requested comment on this conclusion. 84 FR 37970, 37972. DOE also requested comment about any potential impact, including to testing burden, of adopting the term “blowout bowl” and the corresponding definition in ASME A112.19.2–2018, as compared to maintaining the current DOE term “blowout toilet” and its definition in 10 CFR 430.2. In response to the August 2019 RFI, PMI and the CA IOUs both agreed with DOE’s preliminary conclusions and suggested that DOE should update the term “blowout toilet” to “blowout bowl” and define it per the latest ASME standard. (PMI, No. 3 at p. 2; CA IOUs, No. 4 at p. 3).

As discussed previously, in this NOPR DOE further clarifies that “blowout toilet” refers to the entire water closet, whereas ASME’s definition of “blowout bowl” refers specifically to the bowl portion of the product only. Therefore, DOE is not proposing to update the defined term “blowout toilet” in 10 CFR 430.2 with “blowout bowl”; rather, DOE is proposing to replace every instance of “blowout toilet” with “blowout bowl water closet” and to use the definition for “blowout bowl” provided in ASME A112.19.2–2018 (“water closet” is already defined in 10 CFR 430.2) to harmonize its regulations with the industry accepted definition. In addition, DOE proposes to replace all instances of “blowout water closet” in Appendix T and 10 CFR 430.32(q) with “blowout bowl water closets” to be consistent with the proposed updates.

DOE requests comment on the proposal to replace all instances of “blowout toilet” and “blowout water closet” in Appendix T and 10 CFR 430.32(q) with “blowout bowl water closets.”

In addition, the proposed definition from ASME A112.19.2–2018 for “blowout bowl” includes the term “blowout action,” which is also defined in ASME A112.19.2–2018. ASME A112.19.2–2018 defines blowout action as “a means of flushing a water closet whereby a jet of water directed at the bowl outlet opening pushes the bowl contents into the upleg, over the weir, and into the gravity drainage system”. To ensure a consistent understanding of the term “blowout action” DOE also proposes to define in the Federal test procedure the term “blowout action” as it is defined in ASME A112.19.2–2018.

DOE requests comment on the proposal to adopt the term “blowout action” and its corresponding definition from ASME A112.19.2–2018.

#### 4. Gravity Flush Tank Water Closet

Appendix T uses the term “gravity flush tank water closet,” which is not defined in 10 CFR 430.2. However, ASME A112.19.2-2018 defines this term, as shown in Table III-1 of this NOPR. In the August 2019 RFI, DOE requested comment on whether this definition is consistent with how industry has understood and applied the term under DOE regulations, and whether there would be any potential impact to testing burden in adopting the definition to this term. 84 FR 37970 at 37972.

In response to the August 2019 RFI, PMI and the CA IOUs both agreed that the definition from ASME A112.19.2–2018 is consistent with how the industry understands and applies the term, and therefore DOE should adopt the definition. (PMI, No. 3 at p. 2; CA IOUs, No. 4 at pp. 3-4) In addition, amongst all responses to the August 2019 RFI, no stakeholders commented on the potential test burden of adopting the term as defined in ASME A112.19.2-2018. Therefore, because the industry already applies the definition from ASME A112.19.2–2018, DOE is proposing in this NOPR to adopt the same definition, and add it to 10 CFR 430.2. Furthermore, DOE proposes to replace “gravity tank-type toilets” with “gravity flush tank water closets” in 10 CFR 430.32(q).

DOE requests comment on its proposal to adopt the definitions from ASME A112.19.2-2018 for the term “gravity flush tank water closet”.

DOE requests comment on the proposal to replace the term “gravity tank-type toilets” with “gravity flush tank water closets” in its regulations.

## 5. Siphonic Bowl and Siphonic Action

Similar to “gravity flush tank water closet,” the term “siphonic bowl” is also not defined in 10 CFR 430.2, but is defined in ASME A112.19.2-2018. PMI and the CA IOUs commented that the definition from ASME A112.19.2–2018 is consistent with how the industry understands and applies the terms, and therefore DOE should adopt these definitions. (PMI, No. 3 at p. 2; CA IOUs, No. 4 at pp. 3-4) Because the industry already applies the definition from ASME A112.19.2–2018, DOE is proposing in this NOPR to adopt the same definition, and add it to 10 CFR 430.2. Furthermore, DOE proposes to replace “siphonic water closets” with “siphonic bowl water closets” in Appendix T to be consistent with the proposed updates.

DOE requests comment on its proposal to adopt the definition from ASME A112.19.2-2018 for the term “siphonic bowl.”

DOE requests comment on the proposal to replace the term “siphonic water closets” with “siphonic bowl water closets” in its regulations.

In addition, the proposed definition from ASME A112.19.2–2018 for “siphonic bowl” includes the term “siphonic action,” which is also defined in ASME A112.19.2–2018. ASME A112.19.2–2018 defines siphonic action as “the movement of water through a flushing fixture by creating a siphon to remove waste material.” To keep consistent with the industry standard and to clarify the same term for the water closet test procedure, DOE also proposes to adopt the term “siphonic action” and its corresponding definition in ASME A112.19.2–2018.

DOE requests comment on the proposal to adopt the term “siphonic action” and its corresponding definition from ASME A112.19.2–2018.

## 6. Trough-type Urinals

DOE prescribes maximum water use standards for “trough-type” urinals at 10 CFR 430.32(r); however, the term “trough-type” is not defined. ASME A112.19.2-2018 likewise does not define the term “trough-type” as it applies to urinals. In the August 2019 RFI, DOE requested comment on how to define the term “trough-type urinal,” and whether there is an industry definition for this term. 84 FR 37972.

In response, the CA IOUs suggested defining trough-type urinal as “a urinal designed for simultaneous use by two or more persons.” (CA IOUs, No. 4 at p. 4). The CA IOUs stated that this definition provided in a July 2013 publication from the CA IOUs titled “Codes and Standards Enhancement (“CASE”) Report,”<sup>12</sup> which addresses water efficiency opportunities for water closets and urinals through development of new and updated California Appliance Efficiency Regulations.

The definition suggested by the CA IOUs is the same as the definition for “trough-type” urinal found in section 1602(i) of the California Title 20 Appliance Efficiency Regulations and provides that a trough-type urinal is a “a urinal designed for simultaneous use by two or more people.”<sup>13</sup> PMI stated that it had no comment on defining “trough-type” urinal, stating that none

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<sup>12</sup> California Code of Regulations – Title 20. Public Utilities and Energy. Docket 12-AAER-2C; Analysis of Standards Proposal for Toilets and Urinals Water Efficiency. 2013.

<sup>13</sup> The California regulations are available at <https://ww2.energy.ca.gov/2019publications/CEC-140-2019-002/CEC-140-2019-002.pdf>.



of its members manufactured this product. (PMI, No. 3 at p. 2) DOE did not receive any other comments regarding the appropriate definition for trough-type urinals.

DOE tentatively concludes that industry is familiar with the definition of “trough-type” in the California regulations, and that the definition accurately describes the products at issue. Accordingly, DOE is proposing to use the definition found in California’s regulations “trough-type” urinals.

DOE requests comment on the proposal to define the term “trough-type urinal” as “a urinal designed for simultaneous use by two or more people.” DOE specifically requests comment on whether the proposed definition would include products not currently understood to be trough-type urinals, or whether it would exclude products currently understood to be trough-type urinals. In addition, DOE requests comments on whether any physical characteristics or features differentiate trough-type urinals from other urinals.

#### *D. Metric*

Appendix T requires that the water consumption of water closets and urinals be determined using the flush volume in gallons per flush (“gpf”) or liters per flush (“Lpf”).

The CA IOUs commented that, in addition to water consumption, DOE should strongly consider flush performance. (CA IOUs, No. 4 at pp. 2-3) Specifically, they stated the water savings from toilets with low gpf rating would not be realized if more than one flush were required to effectively eliminate solid waste; therefore, as toilets become more efficient, it is important to maintain flush performance utility. *Id.* While ASME A112.19.2-2018 includes

tests to evaluate the performance of the toilet (*i.e.*, how effectively it eliminates waste), the CA IOUs commented that industry stakeholders have expressed concern that these performance tests are not sufficient. *Id.* The CA IOUs also noted that there are voluntary test procedures to confirm flush performance, as determined through research for the CA IOU CASE Report, and that “Maximum Performance (“MaP”) Testing: Toilet Fixture Performance Testing Protocol: Version 5 – March 2013” (“MaP Testing”) is the most popular performance testing method in the industry. *Id.* The CA IOUs commented that MaP Testing classifies how well a toilet moves waste, and is widely accepted by toilet stakeholders including manufacturers, water utilities and standard-setting entities. *Id.* The CA IOUs recommended that DOE consider evaluating the appropriateness of these flush performance metrics for evaluating performance in these plumbing applications. *Id.* at p. 3.

EPCA requires that any test procedures prescribed or amended be reasonably designed to produce test results which measure energy efficiency, energy use, water use, or estimated annual operating cost of a covered product during a representative average use cycle or period of use and not be unduly burdensome to conduct. (42 U.S.C. 6293(b)(3)) Accordingly, DOE’s test procedure for water closets is designed to measure water use. Any quality- or performance-based measures, such as the ability of a water closet to eliminate solid waste, are outside the scope of EPCA’s requirements for DOE test procedure.

Outside the context of a test procedure rulemaking, EPCA does direct DOE to consider potential impacts to product utility, specifically when evaluating new and amended standards. (42 U.S.C. 6295(o)(2)(B)(i)(IV)) In evaluating design options and the impact of potential standard levels in the context of an energy conservation standard rulemaking, DOE evaluates

potential standards that would not lessen the utility or performance of the considered products.

*Id.* However, this analysis is beyond the scope of this NOPR.

#### *E. Averaging Water Consumption across Various Test Pressures*

Appendix T requires water closets and urinals to be tested at various test pressures, as specified in Table III-2. Appendix T also requires that a test be performed three times at each required pressure. The final measured flush volume for each tested unit is the average of the total flush volumes recorded at all test pressures.

**Table III-2 Required Test Pressures in Appendix T**

<b>Product Configuration</b>	<b>Test Pressures (pounds per square inch (“psi”))</b>
Flushometer valve water closets with siphonic bowl	35, 80
Flushometer valve water closets with a blowout bowl	45, 80
Tank-type water closets	20, 50, 80
Urinals	25, 80

NRDC and ASAP commented that the averaging of results from the specified test pressures to determine the water consumption of a water closet or urinal is not representative of product performance in the real world. (NRDC and ASAP, No. 5 at p. 3) These commenters stated that while water pressure may vary substantially across a utility service area, the water pressure at which a single water closet operates would have an expected variation in the 5 to 10 psi range. *Id.* NRDC and ASAP stated that averaging under the DOE test procedure produces a composite result similar to that obtained at a mid-range test pressure. Additionally, citing an analysis of water pressure data from California, they stated the actual system pressures are more likely to be closer to the higher end of the pressure range rather than the lower end. *Id.*

Accordingly, NRDC and ASAP recommended that, for both water closets and urinals, DOE require that the average of flush volumes at each test pressure not exceed the maximum flow rate requirement, rather than the average flush volume across all test pressures, and that the reported value be the highest of the averages. (NRDC and ASAP, No. 5 at pp. 3-4) NRDC and ASAP asserted that these recommended changes simply represent a revision to the calculation of reported test data and would not require additional testing or test apparatus, and thus would not increase the testing burden on manufacturers. *Id.*

As stated, EPCA requires that the test procedures for water closets and urinals be reasonably designed to produce test results which reflect water use during a representative average use cycle. (42 U.S.C. 6293(b)(3)) Water pressure can vary based on the site of installation of a water closet or urinal. Reflecting a range of water pressures in the calculated and reported flush volume provides an average representation. A flush volume reflecting a single water pressure would be less representative of the flush volumes of water closets and urinals installed at locations that do not experience that same water pressure.

Moreover, the analysis cited by NRDC and ASAP regarding water pressures experienced across water systems is specific to California and, as such, may not be representative nationally. In a separate proceeding involving clothes washers, the California Energy Commission (“CEC”) presented several differences in California’s water systems relative to the rest of the nation.<sup>14</sup>

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<sup>14</sup> U.S. Department of Energy— Office of Energy Efficiency and Renewable Energy. *Petition to Exempt from Preemption California’s Water Efficiency Standards for Residential Clothes Washers*. 2005. (Last accessed December 13, 2019.) The September 2005 material from this website is available in Docket # EERE-2006-STD-0124-0010 at [www.regulations.gov](http://www.regulations.gov)

Specifically, CEC noted that “California’s water supply situation is unique in scope and scale compared to other states” (Docket No. EERE-2006-STD-0124-0010, CEC, No.1 at p. 11) As such, an analysis of water pressure in California may not be representative of water pressure nationally. DOE is not aware of available national-level data on water pressure levels in residential dwellings.

The requirement in Appendix T to average the total flush volumes recorded at all test pressures is consistent with ASME A112.19.2-2018, which is an industry consensus standard. The ASME industry-consensus process includes input from a wide variety of national stakeholders. For all the reasons DOE discussed in this section, DOE is not proposing changes to the water pressure and averaging requirements in Appendix T.

DOE requests comment on whether the current test method of averaging of results from the different test pressures to determine the water use of a water closet or urinal is representative of an average use cycle or period of use, and is not unduly burdensome to conduct.

DOE requests comment and data regarding water pressures at product installation sites, and information on how water pressures vary in different locations across the nation.

DOE also proposes to remove the static pressure requirements for flushometer valve water closets (with a siphonic bowl and blowout bowl) in section 3.a.ii. of Appendix T, and instead reference the static pressure requirement provided in Table 5 of ASME A112.19.2–2018. As discussed in the October 2013 Final Rule, stakeholders commented that ASME A112.19.2-2008 (the version of the standard currently incorporated by reference in Appendix T) published

incorrect static pressure requirements for flushometer valve water closets and that the industry standard committee would be addressing this error in the subsequent version of the standard. 78 FR 62970, 62977. DOE specified the correct static pressures as part of the regulatory text in Appendix T in the October 2013 final rule. 78 FR 62970, 62977 In this NOPR, DOE is proposing to incorporate by reference ASME A112.19.2–2018, which includes the correct static pressure requirements. These static pressure requirements mirror the static pressure requirements currently specified in Appendix T.

DOE requests comment on removing the static pressure requirements in Appendix T section 3.a.ii. and instead referencing the static pressure requirement provided in Table 5 of ASME A112.19.2–2018.

Finally, in section 3.b of Appendix T, DOE proposes to replace the reference to section 8.6.4 of ASME A112.19.2-2008 with Table 6 of ASME A112.19.2-2018. Section 8.6.4 in ASME A112.19.2-2008 is referenced to specify the test pressures required for testing. Section 8.6.4 of ASME A112.19.2-2008 (and the 2018 version) in turn references Table 6 of the ASME standard, which provides the required test pressures. Section 8.6.4 of ASME A112.19.2-2008 (and the 2018 version) also provides performance specifications that are not relevant for the purpose of meeting DOE water use standards in 10 CFR 430.32(r). Accordingly, DOE proposes to reference Table 6 directly for the purpose of specifying the required test pressures.

DOE requests comment on replacing the static pressure requirements in Appendix T section 3.b from section 8.6.4 of ASME A112.19.2-2008 with Table 6 of ASME A112.19.2-2018.

#### *F. Additional Directions Regarding Recorded & Calculated Values*

Appendix T provides direction regarding the resolution of the recorded values; rounding of recorded and calculated values; and test set-up as it relates to manufacturer installation instructions. In the August 2019 RFI, DOE requested comment on whether these directions are necessary to ensure that the test procedures are reasonably designed to measure the water use of water closets and urinals during a representative average use cycle or period of use. 84 FR 37973.

In response, PMI suggested, without elaboration, that DOE should remove the additional directions beyond the ASME standard in Appendix T as they are no longer necessary. (PMI, No. 3 at p. 3) NRDC and ASAP commented that the additional directions to the version currently incorporated by reference in Appendix T, ASME A112.19.2-2008, are necessary because the industry standard has several weaknesses that subsequent revisions of the voluntary industry standard have failed to remedy. (NRDC and ASAP, No. 5 at p. 1)

Having considered these comments, DOE is not proposing to eliminate the additional directions in Appendix T. As noted, PMI did not provide any explanation as to why the additional directions are no longer necessary, and did not indicate that these additional instructions are the cause of any burden to manufacturers. As discussed, the additional directions include consistent resolution of the recorded values; rounding of calculated values; and test set-up as it relates to manufacturer installation instructions, which are not specified in ASME A112.19.2-2018, but are needed for compliance purposes.

Section 2 of Appendix T specifies that any measurements shall be recorded at the resolution of the test apparatus, and calculations of water consumption (*i.e.*, flush volume) are consistently rounded to the same number of significant digits as the previous step. While sections 7.3.2 and 8.6.1 of ASME A112.19.2-2018 specify the resolutions of the test apparatus to be used, sections 7.3.3 and 8.6.2 of ASME A112.19.2-2018 do not specify the resolution of recorded measurements. Instead, sections 7.3.3 and 8.6.2 of ASME A112.19.2-2018 specify only how the total calculated flush volume must be rounded, which is consistent with the resolution of the test apparatus. Accordingly, section 2 of Appendix T provides further detail for resolution and rounding requirements, which is consistent with ASME A112.19.2-2018.

Section 3.a.iii. of Appendix T provides further specifications on water level and trim setting for cases in which the manufacturer has provided no instructions regarding such settings. Otherwise, the same section requires that flush volume and tank trim component adjustments shall be set in accordance with the printed instructions supplied by the manufacturer, consistent with section 7.1.2 of ASME A112.19.2-2018. In the October 2013 final rule, DOE concluded that the specifications in ASME A112.19.2-2008 may not be adequate to ensure that manufacturers test gravity tank water closets at the maximum flush volume. 78 FR 62977. Specifically, DOE concluded that while section 7.1.2 of ASME A112.19.2-2008 specifies adjustments made to the tank water level and fill time, it does not specify adjustments made to other trim components such as (but not limited to) the flapper valve, fill valve and tank water level, which could be adjusted to increase flush volume. *Id.* Accordingly, for those products that do not include printed installation instructions, Appendix T specifies setting these trim components to the maximum water use setting so that the maximum flush volume is produced



without causing the water closet to malfunction or leak. The latest version of the ASME standard, ASME A112.19.2-2018, does not provide any further specifications on adjusting the trim components in cases where the manufacturer has provided no instructions regarding these components. Therefore, the additional specifications provided by Appendix T are still warranted for testing products without printed instructions supplied by the manufacturer. For these reasons, DOE is proposing that the current additional directions provided in Appendix T be maintained.

NRDC and ASAP also suggested adding other directions to increase the precision of the measurement and rounding requirements for measuring flush volume from the 0.07 gallons specified in ASME 112.19.2-2008 and 112.19.2-2018 to 0.01 gallons.<sup>15</sup> (NRDC and ASAP, No. 5 at p. 2) (NRDC and ASAP, No. 5 at p. 2) They asserted that Appendix T results in measurements that are not representative of water consumption during a representative average usage cycle or period of use. *Id.* NRDC and ASAP stated that the current measurement and rounding requirements allow for models that use up to 0.07 gallons per flush (“gpf”) in excess of the DOE standard to be certified as meeting the standard. *Id.* NRDC and ASAP commented that at the current DOE standard of 1.6 gpf for water closets, Appendix T allows for a model with an exceedance of up to 4.4% to be certified and, at the current DOE standard of 1.0 gpf for urinals, Appendix T allows for an exceedance of up to 7% to be certified. *Id.* While NRDC and ASAP noted that DOE requirements at 10 CFR 429.30(b) and 10 CFR 429.31(b) require certification

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<sup>15</sup> ASME A112.19.2-2008, section 7.4.2 (“Apparatus”), which is the version currently incorporated by reference, specifies that the apparatus for measuring flush volumes of water closets must be capable of reading increments not exceeding 0.25 liters (0.07 gallons). Section 7.4.3 (“Procedure”), which is incorporated by reference, specifies that the results of each test run are to be rounded down to the nearest 0.25 L (0.07 gal). The requirements are applicable to urinals in section 8.6.1 (“Apparatus”) and 8.6.2 (“Procedure”). The same requirements are also found in the latest version of the ASME standard, ASME A112.19.2-2018. Appendix T requires recording measurements at the resolution of the test instrumentation and rounding calculations of water consumption for each tested unit to that same number of significant digits. Section 2(a) and (b) of Appendix T.

reports for water closets and urinals to include the maximum water use in gallons per flush rounded to the nearest 0.01 gallon, they stated that the current ASME test procedure incorporated by reference is not adequate to achieve the precision required by the current certification requirements for water closets. *Id.* Accordingly, NRDC and ASAP recommended that DOE add directions for testing water closet and urinal water consumption to require test equipment resolution of 0.01 gallon and rounding to the nearest 0.01 gallon. *Id.*

In the context of rounding resolution, ASME A112.19.2-2018 provides resolution requirements that are incorporated by reference in Appendix T. The rounding resolution for flush volume is derived from the resolution specification in ASME A112.19.2-2018 for the apparatus used to measure flush volume. ASME A112.19.2-2018 specifies that the receiving vessel, load cell, or other apparatus used to measure flush volume be capable of measuring volumes to within 0.25 L (0.07 gal). See sections 7.3.2 and 8.6.1 of ASME A112.19.2-2018 for water closets and urinals, respectively. Therefore, the ASME A112.19.2-2018 rounding resolution reflects the resolution specifications of the equipment required for use in the test procedure.

Further, section 7.3.3 and 8.6.2 of ASME A112.19.2-2018 requires that the tests be repeated three times at each of the test pressures. The final measured flush volume for each tested unit is the average of the total flush volumes recorded at each test pressure. In addition, DOE sampling requirements for represented values of water consumption requires that the minimum number of units tested shall be no less than two. *See* 10 CFR 429.30 and 10 CFR 429.31. Although ASME A112.19.2-2018 specifies measuring flush volume with a vessel, load cell, or apparatus capable of measuring volumes to within 0.25 L (0.07 gal), in all likelihood the

repetition of the test and the sampling requirements would average together a range of variations around the nominal measurement; therefore, any variation in the final reported value (resulting from the specified apparatus resolution) is likely to be less than the maximum theoretical level of variation indicated by the commenters.

DOE expects that changes in equipment resolution and rounding requirements could require currently certified water closets and urinals to be retested and recertified. Currently, DOE has no indication that manufacturers are using the ASME A112.19.2-2018 instrument resolution and rounding requirements as a means for exceeding the DOE standard. Further, the benefits from improved resolution would be uncertain given the testing and sampling requirements discussed, but could create additional manufacturer burden. For these reasons, DOE is proposing to maintain the current specifications in Appendix T regarding measurement and rounding specifications.

DOE requests comment on maintaining the current instrument resolution specifications. DOE also requests comment on whether it should specify implementing an instrument resolution of 0.01 to match the DOE reporting requirements, and the associated testing or reporting burden associated with such a change.

DOE requests comment on the level of precision used by industry and test laboratories for measuring and rounding when performing tests for water consumption. Specifically, DOE requests comment on whether the apparatus used for testing generally has a resolution of 0.25 L (0.07 gal) or whether the resolution is more precise.

### *G. Sampling*

In the August 2019 RFI, DOE requested comment on measures that, consistent with EPCA, could be taken to lower the cost of its regulations that apply to water closets and urinals. 84 FR 37972. In response, PMI recommended removing the sample size requirement and instead, calculating the represented value based on only one sample, in line with the ASME standard. (PMI, No. 3 at p. 2) PMI acknowledged that, while there are reasons for testing more than one sample, the cost of compliance could be lowered by reducing sample size. *Id.*

The sampling provisions for water closets in 10 CFR 429.11 and 10 CFR 429.30 require testing at least two units. As PMI acknowledged, there are reasons for testing more than one sample. Relying on a sample size of at least two units is important to account for manufacturing variability and test uncertainty. Testing a minimum of two units and the associated statistics provide a sampling that is more representative of the total population of units than testing of only a single unit. For this reason, DOE is proposing to retain the minimum sample size of two units.

### *H. 10 CFR 430.23 Nomenclature*

10 CFR 430.23(u) and (v) provide the test procedures for the measurement of water consumption for water closets and urinals, respectively. 10 CFR 430.23(u) requires that “the maximum permissible water use allowed for water closets, expressed in gallons and liters per flush (gpf and Lpf), shall be measured in accordance to section 3(a) of appendix T of this subpart.” Similarly, 10 CFR 430.23(v) requires that “the maximum permissible water use allowed for urinals, expressed in gallons and liters per flush (gpf and Lpf), shall be measured in accordance to section 3(b) of appendix T of this subpart.” The language “maximum permissible water use” in the aforementioned sections is incorrect, as the test procedures measure water use,

and the term “maximum permissible water use” is instead descriptive of a water conservation standard. As such, DOE is proposing to replace the language “the maximum permissible water use allowed” in 10 CFR 430.23(u) and 10 CFR 430.23(v) with “the water use”. This amendment would clarify that the DOE test procedures measure water use, whereas the standards in 10 CFR 430.32(q) and (r) establish the maximum allowable water use for water closets and urinals, respectively.

DOE requests comment on the proposed updates for water closets and urinals to replace “maximum permissible water use allowed” with “water use” in 10 CFR 430.23(u) and (v), respectively.

#### *I. Dual-flush Water Closets*

The CA IOUs recommended that DOE consider the differences between single- and dual-flush water closets, and that DOE further research and differentiate between water closet classes. (CA IOUs, No. 4 at p. 2) The CA IOUs stated that the CA IOU CASE Report indicated insufficient data on dual-flush water closet usage patterns in real buildings to justify or verify what the CA IOUs described as a 2:1 flush ratio in the current water closet test procedure. The CA IOUs recommended that DOE consider an approach that takes the sum of the flush volumes from both flushes in the dual-flush, also known as the full-volume flush, into account. *Id.*

A dual-flush water closet is defined as a water closet incorporating a feature that allows the user to flush the water closet with either a reduced or a full volume of water. 10 CFR 430.2. The Federal test procedure does not include a 2:1 full-volume to reduced-volume flush ratio to determine a representative flush volume for dual-flush water closets, or average flush volume for

dual flush water closets. Rather, section 3.a of Appendix T requires measuring the water flush volume for dual flush water closets separately for the full-flush and reduced-flush modes in accordance with section 7.4 of ASME A112.19.2-2008, but does not provide a method for averaging the results from testing the two modes. Because the water use standards in 10 CFR 430.32(q) are based on maximum allowable water use, certification reports and compliance with standards are based on the flush volume obtained from testing the full-flush mode. 10 CFR 429.30(b)(2).

In the October 2013 final rule, DOE determined that it did not have sufficient evidence on which to base a test procedure for representative average water use for dual-flush water closets (*i.e.*, representative water use reflecting an average of the full and reduced flush modes). 78 FR 62970, 62976. Furthermore, DOE stated that it was not establishing either a separate standard or separate certification requirements for the full-flush and reduced-flush modes for dual-flush water closets. *Id.* DOE does not have information or data that would suggest a different determination is warranted.

In the October 2013 final rule, DOE also emphasized that manufacturers, distributors, retailers, and private labelers are not permitted to make any representations of water use for dual-flush water closets other than the maximum flush volume (*e.g.*, average representative water use reflecting an average of the full and reduced flush modes) because DOE did not adopt a test procedure to calculate average representative water use for dual-flush water closets. *Id.* Under 42 U.S.C. 6293(c)(1) and (2), no manufacturer, distributor, retailer, or private labeler may make any representation with respect to the water use of a water closet unless that representation is based on testing conducted in accordance with the relevant DOE test procedures. *Id.*

The Environmental Protection Agency (“EPA”) WaterSense program<sup>16</sup> has a specification for measuring the flush volume of dual-flush water closets and uses a weighted average of the full and reduced flush volumes for residential toilets. In the October 2013 final rule, DOE stated that parties may state that a dual-flush water closet complies with the requirements of EPA's WaterSense program, either in writing or through use of the appropriate WaterSense label, as long as such representations are made in accordance with EPA specifications and such representations do not include a specific value of average representative water use. 78 FR 62970, 62976.

#### *J. Additional Comments*

DOE also received comments related to standards for dual-flush water closets and installation of generic replacement flapper valves. As explained below, both topics are beyond the scope of this test procedure rulemaking.

The CA IOUs recommended amending the standard for dual-flush toilets to a maximum of 1.28 gpf for the full-volume flush. (CA IOUs, No. 4 at p. 2) As stated, DOE is issuing this NOPR as part of its obligation to review test procedures for these products. This follows EPCA’s direction that if the requirements of ASME A112.19.6–1990 are revised at any time and approved by ANSI, DOE must amend the Federal test procedures to conform to the revised ASME/ANSI requirements, unless DOE determines by rule that to do so would not meet the statutory requirements for test procedures. (42 U.S.C. 6293(b)(8)(B)) Additionally, this NOPR

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<sup>16</sup> WaterSense is a voluntary partnership program administered by the EPA that, among other activities, promotes water conservation by providing certification and labeling for water consuming products, including water closets, that meet certain water conservation limits beyond the mandatory standards DOE implements.

addresses the periodic review of test procedures required by EPCA. (42 U.S.C. 6293(b)(1)) The maximum water use standards for water closets are not part of the test procedure and are therefore outside the scope of this rulemaking.

Reaves commented that current test procedure for toilets do not consider the full life cycle of the products being tested and unintentionally result in a significantly inflated measured water savings. (Reaves, No. 6 at p. 1) Reaves stated that installation of generic replacement flapper valves after initial installation often eliminates most of the estimated and expected lifetime water savings. *Id.* Reaves recommended that the test procedure consider the toilet flush volume specification with readily available market replacement parts expected to be used upon flapper valve replacement to achieve the water savings promised by standards. *Id.*

DOE's energy conservation standards and test procedures apply to new water closets. (42 U.S.C. 6302(a)(5)); *see also*, 78 FR 62977 (October 23, 2013). As such, the DOE test procedure for water closets addresses the product as manufactured, not as it may subsequently be modified by the consumer. As a result, consideration of replacement flapper valves is outside the scope of this rulemaking.

#### *K. Smart and Connected Technologies*

The August 2019 RFI sought comments, data and information on the issues related to the emerging smart technology market as they may apply to water closets and urinals. 84 FR 37973. The August 2019 RFI referenced a separate RFI on the emerging smart technology appliance and equipment market, in which DOE requested information to better understand related market



trends and other issues to ensure that DOE did not inadvertently impede innovation while fulfilling its statutory obligations. 83 FR 46886 (Sept. 17, 2018; “September 2018 RFI”).

In response to the August 2019 RFI, the CA IOUs commented that emerging technologies and smart technologies are applicable to water closets and urinals and should be considered in this and future test procedures. (CA IOUs, No. 4 at p. 3) The CA IOUs stated that sensor technology has improved significantly and there is more widespread adoption of electronic, hands free flushing operations. *Id.* They also stated that there have been developments in sensor technology that allow for more reliable testing of water level. *Id.* The CA IOUs recommended further evaluation of this and other sensors including ultrasonic, mechanical vibration-based approaches, and radio-frequency identification (“RFID”) readers. *Id.*

As stated in the September 2018 RFI, DOE recognizes that manufacturers are developing “connected” products, allowing for options such as remote control access, automatic supply replenishment, and intelligent energy consumption. 83 FR 46887. DOE is seeking to avoid inhibiting the market for “smart” products through its standards and test procedure development process. *Id.* Appendix T measures the flush volume of a single flush, and does not measure water levels in water closets or overflow. Under Appendix T, the procedures for measuring flush volume of water closets and urinals do not distinguish between flushing mechanisms activated manually as compared to those activated by sensor; therefore, the procedures would not impede the use of sensors. The CA IOUs did not indicate that the technologies it referenced are impeded by either the DOE test procedure or compliance with the maximum water use standard. DOE will continue to evaluate advances in sensors and smart technology, including any efforts to address these issues by industry.

#### *L. Replacing “Instrumentation” with “Apparatus” in Appendix T*

In section 2 of Appendix T, DOE references the term “instrumentation,” several times. However, the term “instrumentation” is not used in the industry standard; rather, the synonymous term “apparatus” is used. “Apparatus” is also used throughout Appendix T, in addition to “instrumentation.” Therefore, to maintain consistency with the nomenclature used in ASME A112.19.2–2018, DOE is proposing to replace the term “instrumentation” with “apparatus” in Appendix T.

DOE requests comment on the proposal to replace the term “instrumentation” with “apparatus.”

#### *M. Test Procedure Costs, Harmonization, and Other Topics*

##### *1. Test Procedure Costs and Impact*

EPCA requires that test procedures proposed by DOE not be unduly burdensome to conduct. 42 U.S.C. 6314(a)(2). In this NOPR, DOE is proposing to amend the existing test procedures for water closets and urinals by incorporating by reference the most recent version of the referenced industry standard, ASME A112.19.2-2018; updating the term “blowout toilet” to “blowout bowl;” and adding definitions for the terms “gravity flush tank water closet,” “siphonic action,” “siphonic bowl,” and “trough-type urinal,” which are currently used in Appendix T, but not defined. DOE has tentatively determined that these proposed amendments would not be unduly burdensome for manufacturers.

Further discussion of the cost impacts of the proposed test procedure amendments are presented in the following sections.

a) Updating to Current Industry Standards

DOE proposes to amend the existing test procedures for water closets and urinals by incorporating by reference the most recent version of the referenced industry standard, ASME A112.19.2-2018. As discussed, DOE's review of the 2018 version compared with the 2008 version, identified the following two updates to sections relevant to the Federal test procedure include: (1) editorial changes and clarifications; and (2) a correction in section 8.2.1 to the water consumption static test pressure value for urinals to reflect the corresponding value in Table 6. DOE has tentatively determined that the amendments in ASME A112.19.2-2018 would not impact (1) the measured values of water use for water closets and urinals under Appendix T, (2) the representativeness of the results, or (3) the test burden. In addition, incorporation of ASME A112.19.2-2018 would harmonize DOE's test procedures with current industry practice.

b) New and Amended Definitions

DOE proposes to update the replace "blowout toilet" with "blowout bowl water closet" and use the corresponding definition in ASME A112.19.2–2018. DOE has tentatively determined that the terms are understood to include the same products. In addition, incorporation of "blowout bowl" per ASME A112.19.2-2018 would harmonize the term and definition in the DOE's test procedures with current industry practice.

DOE also proposes to add definitions for "gravity flush tank water closet," "siphonic bowl" and "siphonic action" as defined in ASME A112.19.2–2018, and for "trough-type urinal" as defined in California Title 20 Appliance Efficiency Regulations. Each of these aforementioned terms are used in either Appendix T, 10 CFR 430.2(q), 10 CFR 430.2(r), or within another definition; however, none of these terms is currently defined in 10 CFR 430.2.

DOE has tentatively determined that the proposed definitions would harmonize the DOE's test procedures with current industry practice.

#### c) Costs and Impacts

Based on these tentative conclusions, none of the proposed amendments to Appendix T and the associated definitions would require manufacturers to test water closets and urinals that are not already required to be tested). Additionally, none of the proposed amendments would require manufacturers to re-test or re-certify any existing models on the market that have already been tested using Appendix T and properly certified. Therefore, were DOE to adopt these proposed test procedure amendments, water closet and urinal manufacturers would not incur any additional costs.

DOE requests comment on its understanding that there will be no impact or costs to water closet and urinal manufacturers under the proposed amendments.

## 2. Harmonization with Industry Standards

The test procedures for water closets and urinals at Appendix T incorporate by reference ASME A112.19.2-2008, relying on certain provisions of that industry standard. The provisions of the industry standard referenced in the Federal test procedure provide procedures for testing and measuring water consumption, specifications for test apparatus, and other general requirements for water closets and urinals. The industry standard DOE proposes to incorporate by reference *via* amendments described in this notice are discussed in further detail in section IV.M of this document.

DOE requests comment on the benefits and burdens of the proposed updates and additions to industry standards referenced in the DOE test procedure for water closets and urinals.

In the August 2019 RFI, DOE requested comment on the benefits and burdens of, or any other comments regarding, adopting any industry/voluntary consensus-based or other appropriate test procedure, without modification. 84 FR 37973. PMI responded by stating that certification agencies in the U.S. already require manufacturers of water closets and urinals to certify their products in accordance with the latest version of ASME A112.19.2-2018; therefore, it is important for DOE to match all the test procedures outlined in the recent ASME standard (including all terms, definitions, figures and tables) without modification. (PMI, No. 3 at p. 3) The CA IOUs commented generally that DOE should not adopt any industry/voluntary consensus-based method without modification because that risks limiting opportunity for stakeholder participation in the development and adoption of Federal requirements. (CA IOUs, No. 4 at p. 4) The CA IOUs stated that DOE must ensure transparency and that incorporated industry test procedures are fully vetted through the public rulemaking process. *Id.*

DOE is proposing to amend the test procedures consistent with the most recent version of the referenced industry standard, ASME A112.19.2-2018, and through this NOPR is providing an opportunity for comment on its proposal. As noted, EPCA directs that if the requirements of ASME A112.19.6–1990 are revised at any time and approved by ANSI, DOE must amend the test procedures for water closets and urinals to conform to the revised ASME standard, unless DOE determines by rule that to do so would not meet the requirements of EPCA that the test procedures be reasonably designed to produce test results which measure water use during a

representative average use cycle as determined by DOE, and not be unduly burdensome to conduct. (42 U.S.C. 6293(b)(8)(B)) As discussed, DOE has proposed maintaining the additional direction in Appendix T, which DOE previously determined is necessary to provide for consistent resolution of recorded values, rounding of recorded and calculated values, and test set-up as it relates to manufacturer installation instructions.

DOE seeks further comment on the degree to which the DOE should consider harmonizing Appendix T with the most recent relevant industry standard for water closets and urinals, and whether there are any changes to the Federal test method that would produce test results that provide additional benefits to the public as compared to the current DOE test procedure or the relevant industry standard. DOE also requests comment on the benefits and burdens of, or any other comments regarding, adopting any industry/voluntary consensus-based or other appropriate test procedure, without modification.

### 3. Other Test Procedure Topics

In addition to the issues identified earlier in this document, DOE welcomes comment on any other aspect of the existing test procedure for water closets and urinals. DOE issued an RFI to seek more information on whether, as required by EPCA, its test procedures are reasonably designed, to produce results that measure the energy and water use or efficiency of products during a representative average use cycle or period of use. 84 FR 9721 (Mar. 18, 2019). DOE particularly seeks comment on this issue as it pertains to the test procedures for water closets and urinals, as well as information that would help DOE create procedures that are not unduly burdensome to conduct. Comments regarding repeatability and reproducibility are also welcome.

#### *N. Compliance Date*

EPCA prescribes that, if DOE amends a test procedure, all representations of energy efficiency and energy use, including those made on marketing materials and product labels, must be made in accordance with that amended test procedure, beginning 180 days after publication of such a test procedure final rule in the *Federal Register*. (42 U.S.C. 6293(c)(2)) If DOE were to publish an amended test procedure, EPCA provides an allowance for individual manufacturers to petition DOE for an extension of the 180-day period if the manufacturer may experience undue hardship in meeting the deadline. (42 U.S.C. 6293(c)(3)) To receive such an extension, petitions must be filed with DOE no later than 60 days before the end of the 180-day period following publication and must detail how the manufacturer will experience undue hardship. *Id.*

### **IV. Procedural Issues and Regulatory Review**

#### *A. Review Under Executive Order 12866*

The Office of Management and Budget (“OMB”) has determined that this proposed rule is not a significant regulatory action under section 3(f) of Executive Order 12866, Regulatory Planning and Review, 58 FR 51735 (Oct. 4, 1993). Accordingly, this action was not subject to review under the Executive Order by the Office of Information and Regulatory Affairs (“OIRA”) in OMB.

#### *B. Review Under the Regulatory Flexibility Act*

The Regulatory Flexibility Act (5 U.S.C. 601 et seq.) requires preparation of an initial regulatory flexibility analysis (“IRFA”) for any rule that by law must be proposed for public comment, unless the agency certifies that the rule, if promulgated, will not have a significant

economic impact on a substantial number of small entities. As required by Executive Order 13272, “Proper Consideration of Small Entities in Agency Rulemaking,” 67 FR 53461 (Aug. 16, 2002), DOE published procedures and policies on February 19, 2003, to ensure that the potential impacts of its rules on small entities are properly considered during the DOE rulemaking process. 68 FR 7990. DOE has made its procedures and policies available on the Office of the General Counsel’s website: <https://energy.gov/gc/office-general-counsel>.

DOE reviewed this proposed rule under the provisions of the Regulatory Flexibility Act and the procedures and policies published on February 19, 2003. DOE has tentatively concluded that this proposed rule will not have a significant impact on a substantial number of small entities. The factual basis for this determination is as follows:

The Small Business Administration (“SBA”) considers a business entity to be a small business, if, together with its affiliates, it employs less than a threshold number of workers or earns less than the average annual receipts specified in 13 CFR part 121. The threshold values set forth in these regulations use size standards and codes established by the North American Industry Classification System (“NAICS”) that are available at: <https://www.sba.gov/document/support--table-size-standards>. DOE used three NAICS codes to cover all potential products for this rulemaking: 327110 (pottery, ceramics, and plumbing fixture manufacturing); 326191 (plastics plumbing fixture manufacturing); 332999 (all other miscellaneous fabricated metal product manufacturing). The threshold for NAICS classification code 327110 (pottery, ceramics, and plumbing fixture manufacturing), which includes most urinals and water closets covered by this rulemaking, is 1,000 employees or fewer. The threshold for NAICS classification codes 326191 (plastics plumbing fixture manufacturing) and 332999



(all other miscellaneous fabricated metal product manufacturing) is 750 employees or fewer. Since NAICS classification code 327110 includes the majority of water closet and urinal manufacturing and DOE assumes that most, if not all, water closet and urinal manufacturers make at least some products covered by that NAICS classification code, DOE used the more conservative 1,000 employee threshold value for this regulatory flexibility analysis.

DOE collected data from DOE’s compliance certification database<sup>17</sup> to identify manufacturers of water closets and urinals. DOE then consulted publicly-available data and contacted manufacturers, where needed, to determine if they meet the SBA’s definition of a “small business” and have their manufacturing facilities located within the United States. Based on this analysis, DOE identified 19 small businesses that manufacture either water closets or urinals covered by the proposed test procedure.

As described in section III.L.1 of this document, the amendments proposed in this test procedure would not increase costs to water closet or urinal manufacturers, including small businesses. Therefore, DOE tentatively concludes that the impacts of the test procedure amendments proposed in this NOPR would not have a “significant economic impact on a substantial number of small entities,” and that the preparation of an IRFA is not warranted. DOE will transmit the certification and supporting statement of factual basis to the Chief Counsel for Advocacy of the Small Business Administration for review under 5 U.S.C. 605(b).

### *C. Review Under the Paperwork Reduction Act of 1995*

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<sup>17</sup> [www.regulations.doe.gov/certification-data](http://www.regulations.doe.gov/certification-data) (Last accessed December 12, 2019).

Manufacturers of water closets and urinals must certify to DOE that their products comply with any applicable energy conservation standards. To certify compliance, manufacturers must first obtain test data for their products according to the DOE test procedures, including any amendments adopted for those test procedures. DOE has established regulations for the certification and recordkeeping requirements for all covered consumer products and commercial equipment, including water closets and urinals. *See, generally*, 10 CFR part 429. The collection-of-information requirement for the certification and recordkeeping is subject to review and approval by OMB under the Paperwork Reduction Act (“PRA”). Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the PRA, unless that collection of information displays a currently valid OMB Control Number.

The collection-of-information requirement for the certification and recordkeeping requirements for all covered consumer products and commercial equipment, including water closets and urinals has been approved by OMB under OMB control number 1910-1400. Public reporting burden for the certification is estimated to average 35 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. This proposed testing procedures impose no new information collection requirements beyond those approved by OMB in control number 1910-1400.

*D. Review Under the National Environmental Policy Act of 1969*

In this proposed rule, DOE proposes test procedure amendments that it expects will be used to develop and implement future energy conservation standards for water closets and urinals. DOE has determined that this rule falls into a class of actions that are categorically excluded from review under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) and DOE's implementing regulations at 10 CFR part 1021. Specifically, DOE has determined that adopting test procedures for measuring energy efficiency of consumer products and industrial equipment is consistent with activities identified in 10 CFR part 1021, appendix A to subpart D, A5 and A6. Accordingly, neither an environmental assessment nor an environmental impact statement is required.

#### *E. Review Under Executive Order 13132*

Executive Order 13132, "Federalism," 64 FR 43255 (Aug. 4, 1999) imposes certain requirements on agencies formulating and implementing policies or regulations that preempt State law or that have Federalism implications. The Executive Order requires agencies to examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States and to carefully assess the necessity for such actions. The Executive Order also requires agencies to have an accountable process to ensure meaningful and timely input by State and local officials in the development of regulatory policies that have Federalism implications. On March 14, 2000, DOE published a statement of policy describing the intergovernmental consultation process it will follow in the development of such regulations. 65 FR 13735. DOE has examined this proposed rule and has determined that it would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. EPCA governs and prescribes Federal preemption of State regulations as to energy

conservation for the products that are the subject of this proposed rule. States can petition DOE for exemption from such preemption to the extent, and based on criteria, set forth in EPCA. (42 U.S.C. 6297(d)) No further action is required by Executive Order 13132.

#### *F. Review Under Executive Order 12988*

Regarding the review of existing regulations and the promulgation of new regulations, section 3(a) of Executive Order 12988, “Civil Justice Reform,” 61 FR 4729 (Feb. 7, 1996), imposes on Federal agencies the general duty to adhere to the following requirements: (1) eliminate drafting errors and ambiguity, (2) write regulations to minimize litigation, (3) provide a clear legal standard for affected conduct rather than a general standard, and (4) promote simplification and burden reduction. Section 3(b) of Executive Order 12988 specifically requires that Executive agencies make every reasonable effort to ensure that the regulation (1) clearly specifies the preemptive effect, if any, (2) clearly specifies any effect on existing Federal law or regulation, (3) provides a clear legal standard for affected conduct while promoting simplification and burden reduction, (4) specifies the retroactive effect, if any, (5) adequately defines key terms, and (6) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. Section 3(c) of Executive Order 12988 requires Executive agencies to review regulations in light of applicable standards in sections 3(a) and 3(b) to determine whether they are met or it is unreasonable to meet one or more of them. DOE has completed the required review and determined that, to the extent permitted by law, the proposed rule meets the relevant standards of Executive Order 12988.

#### *G. Review Under the Unfunded Mandates Reform Act of 1995*

Title II of the Unfunded Mandates Reform Act of 1995 (“UMRA”) requires each Federal agency to assess the effects of Federal regulatory actions on State, local, and Tribal governments and the private sector. Public Law 104-4, sec. 201 (codified at 2 U.S.C. 1531). For a proposed regulatory action likely to result in a rule that may cause the expenditure by State, local, and Tribal governments, in the aggregate, or by the private sector of \$100 million or more in any one year (adjusted annually for inflation), section 202 of UMRA requires a Federal agency to publish a written statement that estimates the resulting costs, benefits, and other effects on the national economy. (2 U.S.C. 1532(a), (b)) The UMRA also requires a Federal agency to develop an effective process to permit timely input by elected officers of State, local, and Tribal governments on a proposed “significant intergovernmental mandate,” and requires an agency plan for giving notice and opportunity for timely input to potentially affected small governments before establishing any requirements that might significantly or uniquely affect small governments. On March 18, 1997, DOE published a statement of policy on its process for intergovernmental consultation under UMRA. 62 FR 12820; also available at <https://energy.gov/gc/office-general-counsel>. DOE examined this proposed rule according to UMRA and its statement of policy and determined that the rule contains neither an intergovernmental mandate, nor a mandate that may result in the expenditure of \$100 million or more in any year, so these requirements do not apply.

#### *H. Review Under the Treasury and General Government Appropriations Act, 1999*

Section 654 of the Treasury and General Government Appropriations Act, 1999 (Public Law 105-277) requires Federal agencies to issue a Family Policymaking Assessment for any rule that may affect family well-being. This rule would not have any impact on the autonomy or

integrity of the family as an institution. Accordingly, DOE has concluded that it is not necessary to prepare a Family Policymaking Assessment.

*I. Review Under Executive Order 12630*

DOE has determined, under Executive Order 12630, “Governmental Actions and Interference with Constitutionally Protected Property Rights” 53 FR 8859 (March 18, 1988), that this regulation would not result in any takings that might require compensation under the Fifth Amendment to the U.S. Constitution.

*J. Review Under Treasury and General Government Appropriations Act, 2001*

Section 515 of the Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516 note) provides for agencies to review most disseminations of information to the public under guidelines established by each agency pursuant to general guidelines issued by OMB. OMB’s guidelines were published at 67 FR 8452 (Feb. 22, 2002), and DOE’s guidelines were published at 67 FR 62446 (Oct. 7, 2002). DOE has reviewed this proposed rule under the OMB and DOE guidelines and has concluded that it is consistent with applicable policies in those guidelines.

*K. Review Under Executive Order 13211*

Executive Order 13211, “Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use,” 66 FR 28355 (May 22, 2001), requires Federal agencies to prepare and submit to OMB, a Statement of Energy Effects for any proposed significant energy action. A “significant energy action” is defined as any action by an agency that promulgated or is expected to lead to promulgation of a final rule, and that (1) is a significant regulatory action

under Executive Order 12866, or any successor order; and (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy; or (3) is designated by the Administrator of OIRA as a significant energy action. For any proposed significant energy action, the agency must give a detailed statement of any adverse effects on energy supply, distribution, or use should the proposal be implemented, and of reasonable alternatives to the action and their expected benefits on energy supply, distribution, and use.

The proposed regulatory action to amend the test procedure for measuring the water use of water closets and urinals is not a significant regulatory action under Executive Order 12866. Moreover, it would not have a significant adverse effect on the supply, distribution, or use of energy, nor has it been designated as a significant energy action by the Administrator of OIRA. Therefore, it is not a significant energy action and, accordingly, DOE has not prepared a Statement of Energy Effects.

#### *L. Review Under Section 32 of the Federal Energy Administration Act of 1974*

Under section 301 of the Department of Energy Organization Act (Public Law 95–91; 42 U.S.C. 7101), DOE must comply with section 32 of the Federal Energy Administration Act of 1974, as amended by the Federal Energy Administration Authorization Act of 1977. (15 U.S.C. 788; “FEAA”) Section 32 essentially provides in relevant part that, where a proposed rule authorizes or requires use of commercial standards, the notice of proposed rulemaking must inform the public of the use and background of such standards. In addition, section 32(c) requires DOE to consult with the Attorney General and the Chairman of the Federal Trade Commission (“FTC”) concerning the impact of the commercial or industry standards on competition.

The proposed modifications to the test procedure for water closets and urinals would incorporate testing methods contained in certain sections of the following commercial standard: ASME A112.19.2-2018. DOE has evaluated this standard and is unable to conclude whether it fully complies with the requirements of section 32(b) of the FEAA (*i.e.*, whether it was developed in a manner that fully provides for public participation, comment, and review.) DOE will consult with both the Attorney General and the Chairman of the FTC concerning the impact of these test procedures on competition, prior to prescribing a final rule.

#### *M. Description of Materials Incorporated by Reference*

In this NOPR, DOE proposes to incorporate by reference the test standard jointly published by the American Society of Mechanical Engineers (“ASME”) and the Canadian Standards Association (“CSA Group”) titled ASME A112.19.2-2018. ASME A112.19.2-2018 is an industry-accepted test procedure that measures water consumption for water closets and urinals, and is applicable to products sold in North America. The test procedure proposed in this NOPR references various sections of ASME A112.19.2-2018 that address test setup, apparatus, test conduct, and calculations. These sections of ASME A112.19.2-2018 are Section 7.1 “General,” Section 7.1.1 “All tests,” Section 7.1.2 “Gravity flush tank water closets,” Section 7.1.3 “Flushometer tank, electro-hydraulic, or other pressurized flushing device water closets,” Section 7.1.4 “Flushometer valve water closets,” Section 7.1.5 “Procedures for standardizing the water supply system,” Section 7.3 “Water consumption test,” Section 7.3.3 “Procedure,” Section 7.3.5 “Performance,” “Section 8.2 “Test apparatus and general instructions,” Section 8.2.1, Section 8.2.2, and Section 8.2.3, Section 8.6 “Water Consumption Test,” Section 8.6.4 “Performance,” Table 5 “Static test pressures for water closets, kPa (psi),” and Table 6 “Static test pressures for urinals, kPa (psi).”



Copies of ASME Standard A112.19.2-2018 may be purchased from the ASME at Two Park Avenue, New York, NY 10016, or by going to <https://www.asme.org/codes-standards/find-codes-standards/a112-19-2-csa-b45-1-ceramic-plumbing-fixtures?productKey=J0121TM1:J0121TM1>.

## **V. Public Participation**

### *A. Participation in the Webinar*

The time and date webinar are listed in the **DATES** section at the beginning of this document. If no participants register for the webinar, it will be cancelled. Webinar registration information, participant instructions, and information about the capabilities available to webinar participants will be published on DOE's website: <https://cms.doe.gov/eere/buildings/public-meetings-and-comment-deadlines>. Participants are responsible for ensuring their systems are compatible with the webinar software.

Additionally, you may request an in-person meeting to be held prior to the close of the request period provided in the **DATES** section of this document. Requests for an in-person meeting may be made by contacting Appliance and Equipment Standards Program staff at (202) 287-1445 or by email: [Appliance\\_Standards\\_Public\\_Meetings@ee.doe.gov](mailto:Appliance_Standards_Public_Meetings@ee.doe.gov).

### *B. Submission of Comments*

DOE will accept comments, data, and information regarding this proposed rule no later than the date provided in the **DATES** section at the beginning of this proposed rule. Interested

parties may submit comments using any of the methods described in the **ADDRESSES** section at the beginning of this document.

*Submitting comments via [www.regulations.gov](http://www.regulations.gov).* The [www.regulations.gov](http://www.regulations.gov) web page will require you to provide your name and contact information. Your contact information will be viewable to DOE Building Technologies staff only. Your contact information will not be publicly viewable except for your first and last names, organization name (if any), and submitter representative name (if any). If your comment is not processed properly because of technical difficulties, DOE will use this information to contact you. If DOE cannot read your comment due to technical difficulties and cannot contact you for clarification, DOE may not be able to consider your comment.

However, your contact information will be publicly viewable if you include it in the comment or in any documents attached to your comment. Any information that you do not want to be publicly viewable should not be included in your comment, nor in any document attached to your comment. Persons viewing comments will see only first and last names, organization names, correspondence containing comments, and any documents submitted with the comments.

Do not submit to [www.regulations.gov](http://www.regulations.gov) information for which disclosure is restricted by statute, such as trade secrets and commercial or financial information (hereinafter referred to as Confidential Business Information (“CBI”)). Comments submitted through [www.regulations.gov](http://www.regulations.gov) cannot be claimed as CBI. Comments received through the website will waive any CBI claims for the information submitted. For information on submitting CBI, see the Confidential Business Information section.

DOE processes submissions made through *www.regulations.gov* before posting. Normally, comments will be posted within a few days of being submitted. However, if large volumes of comments are being processed simultaneously, your comment may not be viewable for up to several weeks. Please keep the comment tracking number that *www.regulations.gov* provides after you have successfully uploaded your comment.

*Submitting comments via email.* Comments and documents submitted via email also will be posted to *www.regulations.gov*. If you do not want your personal contact information to be publicly viewable, do not include it in your comment or any accompanying documents. Instead, provide your contact information on a cover letter. Include your first and last names, email address, telephone number, and optional mailing address. The cover letter will not be publicly viewable as long as it does not include any comments.

Include contact information each time you submit comments, data, documents, and other information to DOE. No faxes will be accepted.

Comments, data, and other information submitted to DOE electronically should be provided in PDF (preferred), Microsoft Word or Excel, WordPerfect, or text (ASCII) file format. Provide documents that are not secured, written in English and free of any defects or viruses. Documents should not contain special characters or any form of encryption and, if possible, they should carry the electronic signature of the author.

*Campaign form letters.* Please submit campaign form letters by the originating organization in batches of between 50 to 500 form letters per PDF or as one form letter with a

list of supporters' names compiled into one or more PDFs. This reduces comment processing and posting time.

*Confidential Business Information.* Pursuant to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via email two well-marked copies: one copy of the document marked confidential including all the information believed to be confidential, and one copy of the document marked non-confidential with the information believed to be confidential deleted. Submit these documents via email to *PlumbingProducts2017TP0028@ee.doe.gov* or on a CD, if feasible. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

It is DOE's policy that all comments may be included in the public docket, without change and as received, including any personal information provided in the comments (except information deemed to be exempt from public disclosure).

### *C. Issues on Which DOE Seeks Comment*

Although DOE welcomes comments on any aspect of this proposal, DOE is particularly interested in receiving comments and views of interested parties concerning the following issues:

- 1) DOE requests comment on its proposal to incorporate by reference ASME A112.19.2-2018.
- 2) DOE requests comment on its proposal to remove references to section 7.1 and 8.2 of ASME A112.19.2-2018 in Appendix T.

- 3) DOE requests comment on the proposal to replace the term “toilet” with “water closet” in 10 CFR 430.32(q).
- 4) DOE requests comment on the proposal to replace the term “electromechanical hydraulic toilet” with “electromechanical hydraulic water closet,” while retaining the existing regulatory definition of “electromechanical hydraulic toilet.”
- 5) DOE requests comment on the proposal to replace all instances of “blowout toilet” and “blowout water closet” in Appendix T and 10 CFR 430.32(q) with “blowout bowl water closets.”
- 6) DOE requests comment on the proposal to adopt the term “blowout action” and its corresponding definition from ASME A112.19.2–2018.
- 7) DOE requests comment on its proposal to adopt the definitions from ASME A112.19.2-2018 for the term “gravity flush tank water closet”.
- 8) DOE requests comment on the proposal to replace the term “gravity tank-type toilets” with “gravity flush tank water closets” in its regulations.
- 9) DOE requests comment on its proposal to adopt the definition from ASME A112.19.2-2018 for the term “siphonic bowl.”
- 10) DOE requests comment on the proposal to replace the term “siphonic water closets” with “siphonic bowl water closets” in its regulations.
- 11) DOE requests comment on the proposal to adopt the term “siphonic action” and its corresponding definition from ASME A112.19.2–2018.
- 12) DOE requests comment on the proposal to define the term “trough-type urinal” as “a urinal designed for simultaneous use by two or more people.” DOE specifically requests comment on whether the proposed definition would include products not

- currently understood to be trough-type urinals, or whether it would exclude products currently understood to be trough-type urinals. In addition, DOE requests comments on whether any physical characteristics or features differentiate trough-type urinals from other urinals.
- 13) DOE requests comment on whether the current test method of averaging of results from the different test pressures to determine the water use of a water closet or urinal is representative of an average use cycle or period of use, and is not unduly burdensome to conduct.
- 14) DOE requests comment and data regarding water pressures at product installation sites, and information on how water pressures vary in different locations across the nation.
- 15) DOE requests comment on removing the static pressure requirements in Appendix T section 3.a.ii. and instead referencing the static pressure requirement provided in Table 5 of ASME A112.19.2–2018.
- 16) DOE requests comment on replacing the static pressure requirements in Appendix T section 3.b from section 8.6.4 of ASME A112.19.2-2008 with Table 6 of ASME A112.19.2-2018.
- 17) DOE requests comment on maintaining the current instrument resolution specifications. DOE also requests comment on whether it should specify implementing an instrument resolution of 0.01 to match the DOE reporting requirements, and the associated testing or reporting burden associated with such a change.

- 18) DOE requests comment on the level of precision used by industry and test laboratories for measuring and rounding when performing tests for water consumption. Specifically, DOE requests comment on whether the apparatus used for testing generally has a resolution of 0.25 L (0.07 gal) or whether the resolution is more precise.
- 19) DOE requests comment on the proposed updates for water closets and urinals to replace “maximum permissible water use allowed” with “water use” in 10 CFR 430.23(u) and (v), respectively.
- 20) DOE requests comment on the proposal to replace the term “instrumentation” with “apparatus.”
- 21) DOE requests comment on its understanding that there will be no impact or costs to water closet and urinal manufacturers under the proposed amendments.
- 22) DOE requests comment on the benefits and burdens of the proposed updates and additions to industry standards referenced in the DOE test procedure for water closets and urinals.
- 23) DOE seeks further comment on the degree to which the DOE should consider harmonizing Appendix T with the most recent relevant industry standard for water closets and urinals, and whether there are any changes to the Federal test method that would produce test results that provide additional benefits to the public as compared to the current DOE test procedure or the relevant industry standard. DOE also requests comment on the benefits and burdens of, or any other comments regarding, adopting any industry/voluntary consensus-based or other appropriate test procedure, without modification.

## **VI. Approval of the Office of the Secretary**

The Secretary of Energy has approved publication of this proposed rule.

### **List of Subjects in 10 CFR Part 430**

Administrative practice and procedure, Confidential business information, Energy conservation, Household appliances, Imports, Incorporation by reference, Intergovernmental relations, Small businesses.

### **Signing Authority**

This document of the Department of Energy was signed on May 2, 2021, by Kelly Speakes-Backman, Principal Deputy Assistant Secretary and Acting Assistant Secretary for Energy Efficiency and Renewable Energy, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the *Federal Register*.

Signed in Washington, DC, on May 4, 2021.



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Treena V. Garrett  
Federal Register Liaison Officer,  
U.S. Department of Energy

For the reasons stated in the preamble, DOE is proposing to amend part 430 of Chapter II of Title 10, Code of Federal Regulations as set forth below:

## **PART 430--ENERGY CONSERVATION PROGRAM FOR CONSUMER PRODUCTS**

1. The authority citation for part 430 continues to read as follows:

**Authority:** 42 U.S.C. 6291–6309; 28 U.S.C. 2461 note.

2. Section 430.2 is amended by:

- a. Removing the definition for “Blowout toilet;”
- b. Removing “Electromechanical hydraulic toilet” and adding in its place,  
“Electromechanical hydraulic water closet;” and
- c. Adding in alphabetical order, definitions for, “Blowout action,” “Blowout bowl,”  
“Gravity flush tank water closet,” “Siphonic action,” “Siphonic bowl,” and “Trough-  
type urinal.”

The additions read as follows:

### **§430.2 Definitions.**

\* \* \* \* \*

*Blowout action* means a means of flushing a water closet whereby a jet of water directed at the bowl outlet opening pushes the bowl contents into the upleg, over the weir, and into the gravity drainage system.

*Blowout bowl* means a non-siphonic water closet bowl with an integral flushing rim, a trap at the rear of the bowl, and a visible or concealed jet that operates with a blowout action.

\* \* \* \* \*

*Electromechanical hydraulic water closet* means any water closet that utilizes electrically operated devices, such as, but not limited to, air compressors, pumps, solenoids, motors, or macerators in place of or to aid gravity in evacuating waste from the toilet bowl.

\* \* \* \* \*

*Gravity flush tank water closet* means a water closet designed to flush the bowl with water supplied by gravity only.

\* \* \* \* \*

*Siphonic action* means the movement of water through a flushing fixture by creating a siphon to remove waste material.

*Siphonic bowl* means a water closet bowl that has an integral flushing rim, a trap at the front or rear, and a floor or wall outlet, and operates with a siphonic action (with or without a jet).

\* \* \* \* \*

*Trough-type urinal* means a urinal designed for simultaneous use by two or more people.

\* \* \* \* \*

3. Section 430.3 is amended by adding paragraph (h)(3) to read as follows:

**§430.3 Materials incorporated by reference.**

\* \* \* \*

(h) \* \* \*

(3) ASME A112.19.2-2018/CSA B45.1-18, (“ASME A112.19.2-2018”), “Ceramic plumbing fixtures,” approved 2018, IBR approved for appendix T to subpart B.

\* \* \* \*

4. Section 430.23 is amended by revising paragraphs (u) and (v) to read as follows:

**§430.23 Test procedures for the measurement of energy and water consumption.**

\* \* \* \*

(u) *Water closets*. The water use for water closets, expressed in gallons and liters per flush (gpf and Lpf), shall be measured in accordance to section 3(a) of appendix T of this subpart.

(v) *Urinals*. The water use for urinals, expressed in gallons and liters per flush (gpf and Lpf), shall be measured in accordance to section 3(b) of appendix T of this subpart.

\* \* \* \*

5. Appendix T to subpart B of part 430 is revised to read as follows:

**Appendix T to Subpart B of Part 430—Uniform Test Method for Measuring the Water Consumption of Water Closets and Urinals**

*Note:* After [date 180 days after date of publication of water closets and urinals test procedure final rule], representations made with respect to the water consumption of water closets or urinals must fairly disclose the results of testing pursuant to this appendix.

On or after [date 30 days after date of publication of water closets and urinals test procedure final rule] and prior to [date 180 days after date of publication of water closets and urinals test procedure final rule] representations, including compliance certifications, made with respect to the water consumption of water closets or urinals must fairly disclose the results of testing pursuant to either this appendix as it appeared at 10 CFR part 430, subpart B, in the 10 CFR parts 200 to 499 edition revised as of January 1, 2014. Representations made with respect to the water consumption of water closets or urinals tested within that range of time must fairly disclose the results of testing under the selected version. Given that after [date 180 days after date of publication of water closets and urinals test procedure final rule] representations with respect to the water consumption of water closets and urinals must be made in accordance with tests conducted pursuant to this appendix, manufacturers may wish to begin using this test procedure as soon as possible.

#### *0. Incorporation by reference*

DOE incorporated by reference in §430.3, the entire standard for ASME A112.19.2-2018; however, only enumerated provisions of that document apply to this appendix, as follows:

a. Section 7.1.2 “Gravity flush tank water closets,” as specified in section 2.a of this appendix;

- b. Section 7.1.3 “Flushometer tank, electro-hydraulic, or other pressurized flushing device water closets,” as specified in section 2.a of this appendix;
- c. Section 7.1.4 “Flushometer valve water closets,” as specified in section 2.a of this appendix;
- d. Section 7.1.5 “Procedures for standardizing the water supply system,” as specified in section 2.a of this appendix;
- e. Section 7.3 “Water consumption test,” as specified in section 3.a of this appendix;
- f. Section 8.2.1, as specified in section 2.b of this appendix;
- g. Section 8.2.2, as specified in section 2.b of this appendix
- h. Section 8.2.3, as specified in section 2.b of this appendix;
- i. Section 8.6 “Water Consumption Test,” as specified in section 3.b of this appendix;
- j. Table 5 “Static test pressures for water closets, kPa (psi),” as specified in section 2.a and 3.a of this appendix; and
- k. Table 6 “Static test pressures for urinals, kPa (psi)” as specified in section 2.a and 3.a of this appendix.

In cases where there is a conflict, the language of the test procedure in this appendix takes precedence over ASME A112.19.2-2018.

1. *Scope:* This appendix covers the test requirements used to measure the hydraulic performances of water closets and urinals.

## *2. Test Apparatus and General Instructions*

- a. When testing a water closet, use the test apparatus and follow the instructions specified in sections 7.1.1 (including Table 5), 7.1.2, 7.1.3, 7.1.4, and 7.1.5 of ASME A112.19.2-2018 (incorporated by reference, see §430.3). The flushometer valve used in the water consumption test must represent the maximum design flush volume of the water closet. Record each measurement at the resolution of the test apparatus. Round each calculation of water consumption for each tested unit to the same number of significant digits as the previous step.
- b. When testing a urinal, use the test apparatus and follow the instructions specified in sections 8.2.1, 8.2.2, and 8.2.3 (including Table 6) of ASME A112.19.2-2018. The flushometer valve used in the water consumption test must represent the maximum design flush volume of the urinal. Record each measurement at the resolution of the test apparatus. Round each calculation of water consumption for each tested unit to the same number of significant digits as the previous step.

### *3. Test Measurement*

a. Water closets:

(i) Measure the water flush volume for water closets, expressed in gallons per flush (gpf) and liters per flush (Lpf), in accordance with section 7.3, Water Consumption Test, of ASME A112.19.2-2018 (incorporated by reference, see §430.3). For dual-flush water closets, the measurement of the water flush volume shall be conducted separately for the full-flush and reduced-flush modes and in accordance with the test requirements specified section 7.3, Water Consumption Test, of ASME A112.19.2-2018. The final measured flush volume for each tested unit is the average of the total flush volumes recorded at each test pressure as specified in Table 5 “Static test pressures for water closets, kPa (psi),” of ASME A112.19.2-2018.

(ii) Flush volume and tank trim component adjustments: For gravity flush tank water closets, set trim components that can be adjusted to cause an increase in flush volume, including (but not limited to) the flapper valve, fill valve, and tank water level, in accordance with the installation instructions supplied by the manufacturer with the unit. If the installation instructions for the model to be tested do not specify trim setting adjustments, adjust these trim components to the maximum water use setting so that the maximum flush volume is produced without causing the water closet to malfunction or leak. Set the water level in the tank to the maximum water line designated in the installation instructions supplied by the manufacturer or the designated water line on the tank itself, whichever is higher. If the printed installation instructions or the water closet tank do not indicate a water level, adjust the water level to  $1\pm0.1$  inches below the top of the overflow tube or  $1\pm0.1$  inches below the top rim of the water-containing vessel (for gravity flush tank water closets that do not contain an overflow tube) for each designated pressure specified in Table 5 of ASME A112.19.2-2018.

b. Urinals—Measure water flush volume for urinals, expressed in gallons per flush (gpf) and liters per flush (Lpf), in accordance with section 8.6, Water Consumption Test, of ASME A112.19.2-2018. The final measured flush volume for each tested unit is the average of the total flush volumes recorded at each test pressure as specified in Table 6 “Static test pressures for urinals, kPa (psi),” of ASME A112.19.2-2018.

6. Section 430.32 is amended by revising paragraph (q) to read as follows:

**§430.32 Energy and water conservation standards and their compliance dates.**

\* \* \* \* \*

(q) *Water closets.* (1) The maximum water use allowed in gallons per flush for any of the following water closets manufactured after January 1, 1994, shall be as follows:

<b>Water closet type</b>	<b>Maximum flush rate (gpf (Lpf))</b>
(i) Gravity flush tank water closet	1.6 (6.0)
(ii) Flushometer tank water closet	1.6 (6.0)
(iii) Electromechanical hydraulic water closet	1.6 (6.0)
(iv) Blowout bowl water closet	3.5 (13.2)

(2) The maximum water use allowed for flushometer valve water closets, other than those with blowout bowls, manufactured after January 1, 1997, shall be 1.6 gallons per flush (6.0 liters per flush).

\* \* \* \* \*

[FR Doc. 2021-09695 Filed: 5/19/2021 8:45 am; Publication Date: 5/20/2021]